TSMC-01-1388

October 24, 2003

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: Serial No. 10/628,914 07/29/03

Chih-Ming Ke et al.

CD SEM AUTOMATIC FOCUS METHODOLOGY AND APPARATUS FOR CONSTANT ELECTRON BEAM DOSAGE CONTROL

Grp. Art Unit:

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56. Copies of each document is included herewith.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 27, 2003.

Stephen B. Ackerman, Reg.# 37761

Signature/Date 10/27/03

A paper entitled "193nm resist shrinkage," by Su et al., Solid State Technology, May 2001, pp. 52-54 and 57, describes problems encountered in 193 nanometer lithography due to variable shrinkage of the resist caused by exposure to an electron beam during critical dimension measurement of the resist.

U.S. Patent 6,114,681 to Komatsu, "Automatic Focus Control Method and Automatic Focus Control System Having in Focus and Out of Focus States Detection," describes an automatic focus control system for an electron beam column.

U.S. Patent 5,916,716 to Butsch et al., "Emulation Methodology for Critical Dimension Control in E-Beam Lithography," describes a method for compensating for repeating pattern deviations such as across chip line width variations in e-beam lithography.

U.S. Patent 6,130,432 to Pfeiffer et al., "Particle Beam System with Dynamic Focusing," describes a particle beam exposure system with dynamic focusing.

U.S. Patent 6,066,849 to Masnaghetti et al., "Scanning Electron Beam Microscope," describes a method and apparatus for generating an image of a specimen with a scanning electron microscope.

U.S. Patent 5,025,165 to Chen et al., "Method for Producing a Semiconductor Device Using an Electron Beam Exposure Tool and Apparatus for Producing the Device," describes a method of using an e-beam lithography system that comprises optical alignment of a semiconductor body to overcome charging problems.

U.S. Patent Application Serial No. 10/047,266, Filed January 14, 2002, entitled "Reducing Photoresist Shrinkage via Plasma Treatment," assigned to the same assignee, describes using plasma treatment to reduce photoresist shrinkage.

Sincerely,

Stephen B. Ackerman,
Reg. No. 37761

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

OCT 2 9 2003

PATENT & TRADEMARK OFFICE

Docket Number (Optional)	Application Number
TSMC-01-1388	10/628,914
Applicant: Chih-Ming Ke et al.	
Filing Date: 07/29/03	Group Art Unit:

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,114,681	9/5/00	Komatsu	250	201.3	6/4/98
	5,916,716	6/29/99	Butsch et al.	430	30	3/13/97
	6,130,432	10/10/00	Pfeiffer et al.	250	396ML	4/13/99
	5,025,165	6/18/91	Chen et al.	250	491.1	3/26/90
	6,066,849	5/23/00	Masnaghetti et al.	250	310	9/8/98

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

- "193nm resist shrinkage", by Su et al., Solid State Technology, May 2001, pp. 52-54 and 57.
- U.S. Patent Application Serial No. 10/047,266, Filed 1/14/02, "Reducing Photoresist Shrinkage via Plasma Treatment", assigned to the same assignee.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.